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IN THE CLAIMS

CLAIM 1 (Currently Amended) A method for performing a transaction between computer systems, comprising the steps of:

(a) instantiating a ~~transactional~~ service object on the first computer system directly corresponding to a service request;

(b) instantiating one or more business-related objects on said first computer system;

(c) said first computer system associating said business objects with ~~a~~ said service object;

(d) transporting said service and associated business objects to the second computer system; and

(e) said second computer system executing said service object.

CLAIM 2 (Original) The method of claim 1, comprising the further steps, following step (e) of:

(f) modifying said business objects or instantiating new business objects by said second computer system in response to said execution; and

(g) returning said service object and said modified or new business objects to said first computer system.

CLAIM 3 (Original) The method of claim 2, comprising the further step, following step (c), of:

(h) filtering said associated business objects to pass only selected attributes or behaviours.

CLAIM 4 (Original) The method of claim 3, comprising the further steps, occurring before step (a), and performed by both said first and said second computer system, of:

(i) defining a series of said service objects; and

(j) defining a series of business-related objects.

CLAIM 5 (Original) The method of claim 4, comprising the further steps, performed on said second computer system, of:

(k) defining translation logic for translating executing business objects to a database form; and

(l) accessing a database with said database form objects to conduct an enquiry.

CLAIM 6 (Original) The method of claim 5, whereby step (d) includes the steps of:

(di) converting said service and associated business objects to a binary stream by said first computer system;

(dii) passing said binary stream to said second computer system; and

(diii) reinstantiating said binary stream to recover said service and associated business objects

CLAIM 7 (Original) A method for performing a client-server transaction, comprising the steps of:

(a) defining a series of transactional objects on a client, each object directly corresponding to a service request;

(b) defining a series of business-related objects on said server;

(c) in response to a service request, instantiating a service. object on said client from among said series of service objects;

(d) instantiating one more business objects on said client;

(e) associating said one or more business objects with said service object on said client;

(f) transporting said service and associated business objects to a server;

(g) executing said service object by said server;

(h) modifying said business objects or instantiating new business objects by said server in response to said execution; and

(i) returning said service object and said modified or new business objects to said client.

CLAIM 8 (Original) The method of claim 7, comprising the further step, following step (e), of:

(j) filtering said associated business objects to pass only selected attributes or behaviours.

CLAIM 9 (Original) The method of claim 8, comprising the further steps, performed on said server, of:

(k) defining translation logic for translating executing business objects to a database form; and

(l) accessing a database with said database form objects to conduct an enquiry.

CLAIM 10 (Original) The method of claim 9, whereby step (f) includes the steps of:

(fi) converting said service and associated business objects to a binary stream by said client;

(fii) passing said binary stream to said server; and

(fiii) reinstantiating said binary stream to recover said service and associated business

objects.

CLAIM 11 (Canceled) A method for performing a client-server transaction, comprising the steps of:

(a) instantiating a transactional object on the client that directly corresponds to a service request;

(b) transporting said object to a server; and

(c) executing said service on said server.

CLAIM 12 (Original) A client-server process comprising:

(a) a client process including:

(i) an application layer in which exists a series of transactional objects directly corresponding to a service request, and a series of business-related objects, and wherein, in response to a service request, one of said service objects is instantiated and associated with one. or more instantiated said business objects; and

(ii) a middleware layer in which said service and associated business objects are converted into a binary stream; and

(b) a server process including:

(i) a middleware layer, receiving said binary stream and recovering said service and business objects; and

(ii) an application layer executing said recovered service object.

CLAIM 13 (Original) The client-server process of claim 12, further wherein said server application layer modifies said business objects or instantiates new business objects depending upon the result of said service execution, and returns said service object and associated business

objects to said server middleware layer which, in turn, passes said result to said client middleware layer.

CLAIM 14 (Original) The client-server process of claim 13, further comprising:

on said client and said server processes:

(iii) object schemas contained in the respective application layer, by which said sets of service objects and business objects are defined.

CLAIM 15 (Original) The client-server process of claim 14, further comprising:

on said client and said server processes:

(iv) filter schemas, contained within the respective middleware layers, which filter instantiated business objects to pass a subset of attributes.

CLAIM 16 (Original) The client-server process of claim 15, further comprising:

on said server process:

(v) translation schemas translating objects to database form.

CLAIM 17 (Original) A client-server computing system, comprising:

(a) a plurality of client computers each having processor means implementing an application layer, and means implementing a middleware layer linked with a respective application layer;

(b) a plurality of server computers, each having processor means implementing an application layer, and means implementing a respective middleware layer; and

(c) a communications link interconnecting said client machines and said server machines such that service requests and corresponding replies can be sent between a client machine and a server machines; and

wherein, in response to a service request on a client machine, said client application layer instantiates a transactional object corresponding to said service request and instantiates one or more business-related objects, associates said service object with said one or more business objects, and passes said associated object to said client middleware layer, said client middleware layer passing a binary form of said associated objects to said server middleware layer via said communications link, and further wherein, said server middleware layer reinstantiates said associated objects and passes them to said server application layer for said service object to be executed, the result of said execution causing said business objects to be modified or reinstantiated, and said service object associated with said modified or new business objects being returned to said client application layer via said server middleware layer and said client middleware layer.

CLAIM 18 (Original) The system of claim 17, further comprising:

(d) one or more databases accessible by said server machines via their respective application layer in response to execution of a service object to return said result.

CLAIM 19 (Original) The system of claim 18, further comprising:

(e) storage means, on said client and said server machines, for storing a series of service object definitions and a series of business object definitions.

CLAIM 20 (Original) The system of claim 19, further comprising:

(f) a set of filters definitions, stored in said storage means, that are accessed by the client middleware to pass only desired attributes of business objects.

CLAIM 21 (Original) The system of claim 20, further comprising:

(g) of translational logic, stored in said storage means of said server machines, for translating executing services to database form that can access said database.

CLAIM 22 (Canceled) An object oriented programing construct comprising a transactional object directly corresponding to a service request associated with one or more business-related objects.

CLAIM 23 (Original) A method for performing a computer process, comprising the steps of:

(a) instantiating a transactional object directly corresponding to a service request;

(b) instantiating one or more business-related objects;

(c) associating said business objects with a said service object;

(d) transporting said service and associated business objects to another computer system.

CLAIM 24 (Original) The method of claim 23, comprising the further step, following step (c), of:

(e) filtering said associated business objects to pass only selected attributes or behaviours.

CLAIM 25 (Original) A computer-readable medium having a plurality of sequences of instructions stored thereon including sequences of instructions which, when executed by one or more processors, caused said one or more processors to perform the steps of:

(a) instantiating a transactional object on a client directly corresponding to a service request;

(b) instantiating one or more business-related objects on said client;

(c) said client associating said business objects with a said service object;

(d) transporting said service and associated business objects to a server; and

(e) said server executing said service object.

CLAIM 26 (Original) A computer-readable medium having a plurality of sequences of instructions stored thereon including sequences of instructions which, when executed by one or more processors, cause said one or more processors to perform the steps of:

(a) defining a series of transactional objects on a client, each object directly corresponding to a service request;

(b) defining a series of business-related objects on said server;

(c) in response to a service request, instantiating a service object on said client from among said series of service objects;

(d) instantiating one more business objects on said client;

(e) associating said one or more business objects with said service object on said client;

(f) transporting said service and associated business objects to a server;

(g) executing said service object by said server;

(h) modifying said business objects or instantiating new business objects by said server in response to said execution; and

(i) returning said service object and said modified or new business objects to said client.

CLAIM 27 (Original) A computer-readable medium having a plurality of sequences of instructions stored thereon including sequences of instructions which, when executed by one or more processors, cause said one or more processors to perform the steps of:

(a) instantiating a transactional object directly corresponding to a service request;

(b) instantiating one or more business-related objects;

(c) associating said business objects with a said service object;

(d) transporting said service and associated business objects to another computer system.

CLAIM 28 (Original) A computer-readable medium of claim 27 comprising the further step, following step (c), of:

(e) filtering said associated business objects to pass only selected attributes or behaviours.

CLAIM 29 (Original) A computing system for performing a transaction between computer systems, comprising:

the first computer system instantiating a transactional object directly corresponding to a service request, instantiating one or more business-related objects on said first computer system, said first computer system associating said business objects with a said service object and transporting said service and associated business objects; and the second computer system receiving said service and associated business objects and executing said service object.

CLAIM 30 (Original) The system of claim 29, wherein said second computer system, furthermore, modifies said business objects or instantiates new business objects in response to said execution and returns said service object and said modified or new business objects to said first computer system.

CLAIM 31 (Original) The system of claim 29, wherein said first computer system, furthermore, filters said associated business objects to pass only selected attributes or behaviours.